

REMARKS

Claims 7-12 were presented for examination in the present application. The instant amendment adds new claims 13-23. Thus, claims 7-23 are presented for consideration upon entry of the instant amendment.

The instant amendment amends claims 7-9. The preamble of claim 7 has been amended to provide proper antecedent basis to the "glass melt" element. Specifically, the preamble has been amended to change "glasses or glass ceramics" to "a glass melt".

Claim 8 has been amended to clarify that the "windings" are a "plurality of windings". In addition, claim 8 has been amended to provide proper antecedent basis to the "energy-input region" element. Specifically, claim 8 has been amended to change "the energy-input region" to "an energy-input region of said HF coil".

Claim 9 has been amended to change "the direction of flow of the glass melt" to "said flow direction" for antecedent basis purposes.

It is respectfully submitted that these amendments to claims 7-9 merely make explicit what had been implicit in the claims.

Claims 7-12 were rejected under 35 U.S.C. §102(b) over U.S. Patent No. 4,687,646 to Mateika et al. (Mateika), U.S. Patent No. 4,049,384 to Wenckus et al. (Wenckus), and French Publication No. 2,768,257 to Sobolev et al. (Sobolev).

Claim 7 has been amended to require, in part, that the channel is arranged so that the glass melt has a flow direction that is essentially horizontal.

In contrast, it is submitted that the devices of Mateika, Wenckus, and Sobolev require the melt flow in a vertical direction.

For example, Mateika is directed to a cold crucible having walls of double walled metal pipes, which are bent at right angles and which are arranged in a circle and through which cooling medium flows. After completion of the melting and crystallisation process, respectively, the wall of the crucible formed by the pipes 1 is moved away from the bottom 15 and the contents can then very easily be pushed out the open cylinder. See Col. 2, line 60 through Col. 4, line 5. Thus, Mateika provides a cold crucible having vertical flow and not the horizontal flow of claim 7.

Similarly, Wenckus is directed to a cold crucible system including two half assemblies 10 and 11 each formed of a plurality of copper tubes 12 having fluid-tight end caps 13. See Col. 3, lines 40-50. In addition, Wenckus provides means to impart translational motion to a rod 90, in the form of a rack, engaging a pinion 75 driven by motor 76. The crystal is pulled from melt 91 contained in the solid shell 92 of the material being processed. See Col. 6, lines 30-35, as well as FIG. 6. Thus, Wenckus also provides a cold crucible having vertical flow and not the horizontal flow of claim 7.

Sobolev, as provided by its English equivalent, U.S. Patent No. 6,058,741, is directed to an apparatus for processing

radioactive waste. As such, it is respectfully submitted that Sobolev, as asserted by the Office Action, has been mischaracterized. Rather, Sobolev includes cooled induction melter 20 (FIG. 5) having a housing 21, side walls 22 and a bottom 23 of which are made of metal pipes disposed with a gap 24 and combined by a collector 25 for supplying and discharging a coolant. It is submitted that housing of Sobolev is akin to the crucibles of Mateika and Wenckus, and as such does not disclose or suggest the horizontal flow of claim 7.

For at least the reasons set forth above, it is submitted that Mateika, Wenckus, and Sobolev do not disclose or suggest claim 7. Claim 7 is therefore believed to be in condition for allowance. Since Claims 8-12 depend from the aforementioned claim 7, they are also believed to be in condition for allowance. Reconsideration and withdrawal of the rejection to claims 7-12 is respectfully requested.

The instant amendment adds new claims 13-23 to point out various aspects of the present application. Support for new claims 13-23 can be found in the specification at least at page 12, lines 5-9, as well as in Figures 2, 6, and 7.

It is believed that new claims 13-22 are in condition for allowance. For example, claim 13 provides a device for refining a melt, including a channel for channeling the melt in a horizontal flow direction and a first coil for input of energy into the melt. The first coil has a plurality of windings positioned about the channel so that each winding runs in the horizontal flow direction along the sides but not across the open top of the channel.

It is respectfully submitted that the cited art does not disclose or suggest the first coil of claim 13. Thus, claim 13 is believed to be in condition for allowance. Since claims 14-22 depend from the aforementioned claim 13, they are also believed to be in condition for allowance.

In addition, claim 14 provides that each winding in the plurality of windings is curved in a plane defined through the horizontal flow direction. It is respectfully submitted that the cited art does not disclose or suggest the windings curved as claimed by claim 14. Thus, claim 14 is believed to be in condition for allowance.

Further, claim 15 provides a second heating device disposed at the open top. It is also respectfully submitted that the cited art does not disclose or suggest the second heating device of claim 15. Thus, claim 15, as well as claims 16-20 that depend therefrom, are believed to be in condition for allowance.

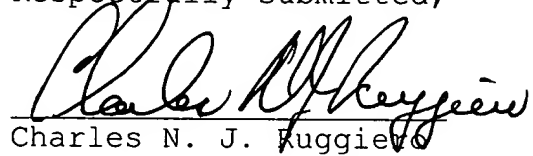
It is also believed that new claim 23 is in condition for allowance since it depends from claim 7. Moreover, it is respectfully submitted that the cited art does not disclose or suggest the HF coil of claim 23 that is assigned to the channel so that an open top of the channel remains open and, thus, claim 23 is patentable for at least the reasons set forth above.

In view of the above, it is respectfully submitted that the present application is in condition for allowance. Such action is most earnestly solicited.

If for any reason the Examiner feels that consultation with Applicants' attorney would be helpful in the advancement of the prosecution, he is invited to call the telephone number below for an interview.

Respectfully submitted,

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